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THE NATH LAW GROUP				
112 South West Street				
Alexandria, VA 22314				
EXAMINER				
RIPA, BRYAND				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/549,682

**Applicant(s)**

SCHROECK ET AL.

**Examiner**

BRYAN D. RIPA

**Art Unit**

1795

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-5,7,10-24,26 and 27 is/are pending in the application.
- 4a) Of the above claim(s) 12-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-5,7,10,11,26 and 27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB06)  
Paper No(s)/Mail Date 9/19/05
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notes of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

In response to the amendment received on May 13, 2010:

- claims 1, 3-5, 7, 10, 11, 26 and 27 are presently pending
- FR Pat. No. 1,226,638 has been considered due to Applicant's submission of a concise explanation of the reference's relevance
- the objections to claims 6, 7 and 9 have been withdrawn due to the amendments to the claims
- the rejection of claims 1-11 under 35 U.S.C. 112 second paragraph have been withdrawn in light of the amendments to the claims
- all prior art rejections are withdrawn in light of the amendments to the claims
- new grounds of rejection are presented below

### ***Claim Interpretation***

1. Claim 1, as amended, now recites the following additional statement in the preamble: "wherein said shaped dental parts are electrodeposited by securing at least one electrode to a part or model to be coated by electrodeposition" (see amended claim 1 at lines 4-6).

The Examiner wishes to point out that Applicant's claim is directed towards an apparatus for electrodeposition of shaped dental parts. Please note, as discussed in MPEP section 2115, in apparatus claims directed to machinery which works upon an article the material or article to be worked upon does not limit the structure being claimed. Here, the Examiner is treating the limitations directed to the shaped dental parts as the article to be worked upon by the electrodeposition apparatus. Consequently, the limitations relating to the dental part to be worked upon by the electrodeposition apparatus are not being given any patentable weight.

***Claim Rejections - 35 USC § 102***

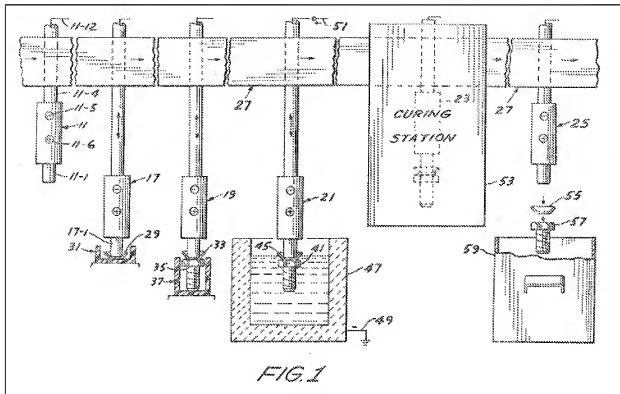
The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1, 4, 5, 7 10, 11, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (U.S. Pat. No. 3,575,832) (hereinafter referred to as "JOHNSON").

Regarding claim 1, JOHNSON teaches an apparatus for electrodeposition which is capable of functioning for the electrodeposition of shaped dental parts such as skeletons for crowns, inlays, bridges and the like which are electrodeposited by securing at least one electrode to a part or model to be coated by electrodeposition (see

generally col. 1 lines 20-22 teaching the apparatus for the electrodeposition of small objects) having at least one current/voltage source and electrodes which can be arranged in a vessel that can be filled with an electrolyte (see col. 3 lines 34-36 teaching the workpiece being electrically connected to a power source that acts as an electrode; see also col. 3 lines 29-34 teaching tank 47 being filled with a coating bath, i.e. an electrolyte), the apparatus comprising:

- there is at least one magnetic connecting means for producing the electrical contact for the electrodeposition between at least one electrode and the current/voltage source (see col. 1 lines 49-58 teaching the assembly 21 comprising an electromagnet acting as a magnetic connecting means through which electrical contact is made to the workpiece);
- the magnetic connecting means comprising two parts which interact with one another through magnetic force (see assembly 21 and workpiece 41 comprising two parts which interact with one another through magnetic force);
- one part of the two parts of the magnetic connecting means connected to the current/voltage source (see assembly 21 electrically connected to conductor 51 which is connected to the power source; see also col. 3 lines 34-36); and
- one part of the two parts of the magnetic connecting means connected to an electrode (see assembly 21 and col. 3 lines 34-36 teaching bolt 41, i.e. the workpiece, connected to the power supply through assembly 21 so as to act as an electrode during the electrodeposition). See figure 1 below.



Regarding claim 4, JOHNSON teaches the apparatus for electrodeposition wherein the magnetic connecting means comprises a magnet and magnetizable metal part (see assembly 21 and bolt 41 above comprising an electromagnet, i.e. a magnet, and a magnetizable metal part). See figure 1 above.

Regarding claim 5, JOHNSON teaches the apparatus for electrodeposition wherein the magnet has a round cross-sectional area (see core 17-1 comprising the contact of the electromagnet and having a round cross-sectional area). See figure 1 above.

Regarding claim 7, JOHNSON teaches the apparatus for electrodeposition wherein the connection of the part connected to the current/voltage source comprises a connection to a head or cover part located above the vessel during electrodeposition (see assembly 21 comprising a head or cover part which is located above tank 47).

Regarding claim 10, JOHNSON teaches the apparatus for electrodeposition wherein the electrode or the electrode part is of a rod-like design (see assembly 21). See figure 1 above.

Regarding claim 26, JOHNSON teaches the apparatus for electrodeposition wherein the magnet has a round cross-sectional area (see core 17-1 comprising the contact of the electromagnet and having a round cross-sectional area). See figure 1 above.

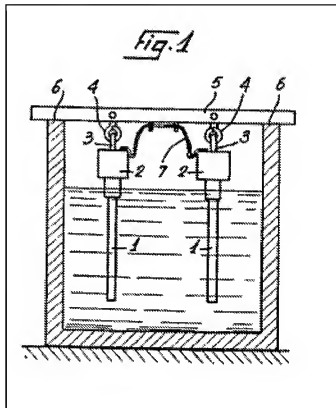
Regarding claim 27, JOHNSON teaches the apparatus for electrodeposition wherein the magnet is arranged in a sleeve-like receptacle in the electrode or in the electrode part (see thimble 45 acting as a sleeve like component that is arranged around the electromagnet connecting core in assembly 21). See figure 1 above.

3. Claims 1, 3-5, 7, 10, 11, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Bozel (FR Pat. No. 1,226,638) (hereinafter referred to as "BOZEL").

Regarding claim 1, BOZEL teaches an apparatus for electrodeposition which is capable of functioning for the electrodeposition of shaped dental parts such as skeletons for crowns, inlays, bridges and the like which are electrodeposited by securing at least one electrode to a part or model to be coated by electrodeposition (see figure 1 below and the first paragraph on page 1 describing the invention pertaining to the supports or mountings provided to attach parts to be electroplated with the electrical power supply) having at least one current/voltage source and electrodes which can be arranged in a vessel that can be filled with an electrolyte (see top of page 5 teaching bar 5 being connected with a current source and parts 1 acting as electrodes which are undergoing electrolysis), said apparatus comprising:

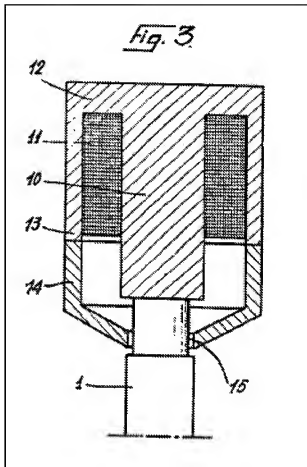
- at least one magnetic connecting means for producing the electrical contact for the electrodeposition between at least one electrode and the current/voltage source (see mounting 2 below and first and third paragraphs on page 5);
  - said magnetic connecting means comprising two parts which interact with one another through magnetic force (see first and third paragraphs on page 5);
  - one part of said two parts of the magnetic connecting means connected to the current/voltage source (see bar 5 which as discussed in first and third paragraphs on page 5 are connected to the current source); and
  - one part of said two parts of the magnetic connecting means connected to an electrode or part of an electrode (see part 1 acting as an electrode as claimed).
- See figure 1 below.





Regarding claim 3, BOZEL teaches the apparatus wherein the magnetic connecting means comprises two magnets (see mounting 2 in figure 1 above showing multiple mountings each of which would contain a magnet).

Regarding claim 4, BOZEL teaches the apparatus wherein the magnetic connecting means comprises a magnet and a magnetizable metal part (see figure 3 depicting central core 10 which is magnetic and part 1 which is made of a magnetizable metal).



Regarding claims 5 and 26, BOZEL teaches the apparatus wherein the magnet has a round cross-sectional area (see fourth paragraph on page 5 teaching the mounting 2 of figure 3 comprising an annular and disc shaped components thereby implicitly teaching the core 10 having a round cross-section).

Regarding claim 7, BOZEL teaches the apparatus wherein the connection of the part connected to the current/voltage source comprises a connection to a head or cover part located above the vessel during the electrodeposition (see figure 3 above depicting

mounting 2 which is the part connected to the current/voltage source having ring 14, i.e. a head or cover part, which is located above the vessel during electrodeposition).

Regarding claim 10, BOZEL teaches the apparatus wherein the electrode or the electrode part is of a rod-like design (see part 1 in figure 1 being of a rod-like design).

Regarding claims 11 and 27, BOZEL teaches the apparatus wherein the magnet is arranged in a sleeve-like receptacle in the electrode or in the electrode part (see figure 3 above showing part 1 in contact with disc 12 so as to form a sleeve-like receptacle).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 3, 5 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over JOHNSON as applied to claim 1 above.

Regarding claim 3, JOHNSON does not explicitly teach the apparatus for electrodeposition wherein the magnetic connecting means comprises two magnets.

However, it would have been obvious to one of ordinary skill that with more complex workpieces, i.e. having more intricate structures, the addition of a second magnetic contact point or a second electromagnet might be required. In fact, the need to apply several contact points was considered by JOHNSON (see col. 4 lines 12-16 teaching the need to tailor the number of contact points depending upon the application).

Furthermore, the mere duplication of parts, without any new or unexpected results, is within the ambit of one of ordinary skill in the art. See *In re Harza*, 124 USPQ 378 (CCPA 1960) (see MPEP § 2144.04).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to add an additional magnetic contact point depending on the shape and weight of the workpiece so as to have two magnets as claimed.

Regarding claim 5, JOHNSON teaches the apparatus for electrodeposition wherein the magnet has a round cross-sectional area (see core 17-1 comprising the contact of the electromagnet and having a round cross-sectional area). See figure 1 above.

Regarding claim 11, JOHNSON teaches the apparatus for electrodeposition wherein the magnet is arranged in a sleeve-like receptacle in the electrode or in the electrode part (see thimble 45 acting as a sleeve like component that is arranged around the electromagnet connecting core in assembly 21). See figure 1 above.

***Response to Arguments***

Applicant's arguments with respect to claims 1, 3-5, 7, 10 and 11 have been considered but are moot in view of the new ground(s) of rejection.

Please note however, because JOHNSON is again applied in the new grounds of rejection the arguments still applicable to the present rejection are addressed below.

Applicant argues that:

*"Johnson fails to teach or suggest the feature of the magnetic connecting means connected to the current/voltage source and fails to teach or suggest the feature of the magnetic connecting means connected between the electrode and the current/voltage source." See Remarks at page 8.*

The Examiner respectfully disagrees with Applicant's contention that JOHNSON fails to teach the magnetic connecting means connected to the current/voltage source and the magnetic connecting means connected between the electrode and the current/voltage source. For at least the reasons stated previously the Examiner is of the opinion that JOHNSON does teach the claimed elements.

More specifically, figure 1 of JOHNSON clearly shows assembly 21, i.e. the magnetic connecting means, connected to conductor 51 which is connected to the positive terminal of a power supply in order to effectuate the plating of bolt 41. Moreover, figure 1 also shows assembly 21 located between bolt 41, i.e. the electrode, and the current/voltage source connected to conductor 51 (see figure 1 from JOHNSON above).

Furthermore, with respect to the electroplating process the object to be plated necessarily acts as an electrode during the electrolytic process. Were this not so, it would be impossible for any plating or coating to occur on the object. Consequently, it is the Examiner's position that the interpretation of the claim term electrode to read on the bolt 41 of JOHNSON to be reasonable interpretation of the claim and application of the prior art reference.

Applicant further argues that:

*"the rejection under 35 USC § 103(a) alleges that it would have been obvious to provide a second contact point or a second electromagnetic, with reference to duplication of parts. This stipulation fails to meet the KSR test because the use of two magnets wherein in combination with, 'one part ... of the magnetic connecting means connected to the current/voltage source and one part ... of the magnetic connecting means connected to an electrode or part of an electrode,' is not a mere design step (not 'a design step well within the grasp of a person of ordinary skill in the relevant art'). In this regard, Johnson specifies that the work is held by the magnet of the loading assembly. For example: 'Bolt 35 is attracted to and held by the magnet of loading assembly 19 which is then raised to its upper position.' (Johnson at column 3, lines 19-25.)*

*Therefore Johnson fails to suggest Applicants' arrangement of positioning the magnet between the electrical source and the electrode. This is more than a superficial difference; it is a basic function of the Johnson operability." See Remarks at page 11.*

The Applicant's arguments as to the impropriety of the 103 rejection appear to be directed at two alleged deficiencies: (1) that the KSR standard for obviousness has not been met and (2) that JOHNSON fails to teach the arrangement of the magnetic connecting means between the current/voltage source and the electrode. The Examiner, however, respectfully disagrees with both of Applicant's assertions.

First, with respect to the argument that the Examiner has not met the standard for determining obviousness, for the reasons mentioned previously the Examiner is of the opinion that it would have been obvious to one of ordinary skill in the art to employ the use of two magnetic connection assemblies in the apparatus of JOHNSON (see the rejection above of claims 3, 5, and 11 under 35 U.S.C. 103(a)).

In fact, as pointed out in the earlier office action, JOHNSON teaches that there will be situations in which the number of contact points between the object to be plated, i.e. the electrode, and the power supply might be adjusted depending on the specific application (see col. 4 lines 5-16 teaching the need to tailor the number of contact points depending upon the application; see also col. 4 lines 17-21 teaching the need to alter the invention of JOHNSON depending on the conditions and uses of the specific application).

Consequently, one of ordinary skill in the art would have readily appreciated and understood that in certain embodiments several connection points would be required to provide sufficient contact area for the electrical power to be supplied adequately to the object to be plated.

Finally, as to the arguments that JOHNSON fails to teach the arrangement of the magnetic connecting means between the current/voltage source and the electrode, for at least the reasons mentioned previously with respect to Applicant's arguments as to the anticipation rejection of the claims under JOHNSON the Examiner is of the opinion that the claim limitations do read on the apparatus of JOHNSON.

Therefore, Applicant's arguments with respect to these regards are unpersuasive for at least the reasons mentioned previously.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- 1) U.S. Pat. No. 3,133,007 to Creese et al., which teaches an electroplating apparatus employing the use of a magnetic connection mentions to attach an object to be plated to the holding rack (see figures 3, 4 and 5).
- 2) U.S. Pat. No. 3,567,592 to Wismann which teaches an electroplating method and apparatus for making dental prosthesis (see figures 1 and 2).
- 3) U.S. Pat. No. 2,094,308 to Snell teaching an electroplating apparatus and method for making dental prosthesis (see figures 4 and 11; see also page 2 right hand column at lines 21-49).
- 4) U.S. Pat. No. 3,810,258 to Mathauser teaching an electric coupler for magnetically attaching two electrical contacting means (see figures 1 and 2).



- 5) U.S. Pat. No. 1,168,280 to Buch teaching the use of a magnetic rack in an electroplating apparatus for attaching multiple workpieces to the rack or workpiece holder (see figure 2 and 3; see also page 1 lines 69-87).
- 6) U.S. Pat. No. 4,288,298 to Rogers teaching an electroplating apparatus and corresponding method for producing dental prosthesis which attaches the dental prosthesis during the electroplating by means of screwing into a conductive substrate (see figures 3-5).

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRYAN D. RIPA whose telephone number is 571-270-7875. The examiner can normally be reached on Monday to Friday, 9:00 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Harry D Wilkins, III/  
Primary Examiner, Art Unit 1795

/B. D. R./  
Examiner, Art Unit 1795